

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NM-110-AD; Amendment 39-12729; AD 2002-08-17]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, and DC-10-30F (KC10A and KDC-10) Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, and DC-10-30F (KC10A and KDC-10) airplanes. This action requires revising the airplane flight manual to advise the flightcrew of necessary procedures if certain thrust reverser indicator lights illuminate or are inoperative, and locking out any affected thrust reverser under certain conditions. This action also provides for returning a thrust reverser to service after it has been locked out. This action is necessary to prevent an uncommanded in-flight deployment of a thrust reverser, which could result in reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective May 17, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 17, 2002.

Comments for inclusion in the Rules Docket must be received on or before July 1, 2002.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2002-NM-110-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2002-NM-110-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). Information related to this AD may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT:

Technical Information: Philip C. Kush, Aerospace Engineer, Propulsion Branch, ANM-140L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5263; fax (562) 627-5210.

Other Information: Judy Golder, Airworthiness Directive Technical Editor/Writer; telephone (425) 227-1119, fax (425) 227-1232. Questions or comments may also be sent via the Internet using the following address: judy.golder@faa.gov. Questions or comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

SUPPLEMENTARY INFORMATION: The FAA has received a report that, on February 16, 2002, an uncommanded deployment of a thrust reverser occurred on the number 1 engine of a McDonnell Douglas Model DC-10-30 airplane equipped with General Electric CF6-50 engines. The uncommanded deployment occurred following climb and level-out at 17,000 feet. The flightcrew reported severe buffeting of the airplane with yaw to the left and pitch-down of about five degrees. The "REV UNLOCK" light illuminated prior to onset of the buffeting. The flightcrew shut down the engine, dumped fuel, turned back to the departure airport, and landed the airplane. No injuries were reported among passengers or crew.

Uncommanded deployment of a thrust reverser with a dual translating cowl requires a minimum of two failures: (1) the over pressure shut-off valve (OPSOV) must let pressure enter into the thrust reverser actuation system; and (2) the directional pilot valve (DPV) must command this pressure in the deploy direction. The cause of the presence of pressure in the thrust reverser system has not been determined.

Results of a subsequent investigation by the engine manufacturer revealed that the DPV was misassembled during overhaul by the DPV manufacturer in 1997. The DPV was installed on the incident airplane in 1999. The misassembly involved incorrect installation of a washer and bushing in the DPV piston/poppet subassembly. Results of vibration-table testing showed that a DPV misassembled in this way could change positions from "stow command" to "deploy command" on its own. When a DPV is in the "deploy command" position, a single failure of the OPSOV could result in an uncommanded deployment of the thrust reverser during flight. This condition, if not corrected, could result in reduced controllability of the airplane.

McDonnell Douglas Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30F, and DC-10-30F (KC10A and KDC-10) airplanes are equipped with the same or similar engines and thrust reverser systems as the Model DC-10-30 airplane involved in the incident described previously. Therefore, these models may be subject to the same unsafe condition.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing DC-10 Minimum Equipment List Procedures Manual, Item 78-1, Revision 11, dated January 1999. Item 78-1 describes maintenance procedures for deactivating and locking a fan thrust reverser, as well as an optional method for deactivating and locking a fan thrust reverser.

Explanation of Terminating Action

The FAA previously has issued AD 2001-17-19, amendment 39-12410 (66 FR 44950, August 27, 2001), which applies to all McDonnell Douglas DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, and DC-10-30F (KC10A and KDC-10) airplanes. Among other actions, that AD requires eventual installation of an additional locking system on each thrust reverser. Airplanes on which the additional locking system has been installed according to AD 2001-17-19 are not subject to this AD.

Other Relevant Rulemaking

The FAA has recently issued emergency AD 2002-08-51, which is applicable to Airbus Model A300 B2 and B4 series airplanes equipped with General Electric CF6-50 engines. That AD requires deactivating both thrust reversers and revising the FAA-approved airplane flight manual (AFM) to impose performance penalties during certain takeoff conditions to ensure that safe and appropriate performance is achieved for airplanes on which both thrust reversers have been deactivated. That AD is intended to prevent an uncommanded in-flight deployment of a thrust reverser, which could result in reduced controllability of the airplane. Because the identified unsafe condition may be especially critical for Airbus Model A300 B2 and B4 series airplanes, the FAA found it appropriate to issue the action for those airplanes as an emergency AD.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to prevent an uncommanded in-flight deployment of a thrust reverser, which could result in reduced controllability of the airplane. This AD requires revising the FAA-approved AFM to advise the flightcrew of necessary procedures if the "REVERSER UNLOCK" (also labeled "REV IN TRANS") or the "REVERSER VALVE OPEN" lights of engine 1 or engine 3 illuminate or are inoperative. This AD also requires locking out the affected thrust reverser if either of these lights illuminate or are inoperative or if a thrust reverser fails to stow after landing. This AD also provides for returning a thrust reverser to service after it has been locked-out.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the

commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NM-110-AD." The postcard will be date-stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-08-17 McDonnell Douglas: Amendment 39-12729. Docket 2002-NM-110-AD.

Applicability: Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F, and DC-10-30F (KC10A and KDC-10) airplanes; certificated in any category; Except those on which an additional locking system has been installed on the thrust reverser on engine 1 and engine 3, according to paragraph (c) of AD 2001-17-19, amendment 39-12410.

Note 1: This AD applies to each airplane identified in the preceding applicability

provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent an uncommanded in-flight deployment of a thrust reverser, which could result in reduced controllability of the airplane, accomplish the following:

Airplane Flight Manual Revision

(a) Within 15 days after the effective date of this AD, revise the Limitations Section of the FAA-approved airplane flight manual (AFM) to include the following information (this may be accomplished by inserting a copy of this AD into the AFM):

THRUST REVERSER LIGHTS

A. If the "REVERSER UNLOCK" (also labeled "REV IN TRANS") light of engine 1 or engine 3 or the "REVERSER VALVE OPEN" light of engine 1 or engine 3 illuminates, even if the aircraft behavior is normal (not accompanied by aircraft buffet, trim change, or performance degradation), the flightcrew must:

- Reduce the throttle to Flight Idle, AND
- Land at a suitable airport.

- B. Takeoff is not permitted if:
1. Any of the conditions of A., above, have occurred, OR
 2. A thrust reverser did not stow after previous landing, OR
 3. Either the "REVERSER UNLOCK" (also labeled "REV IN TRANS") light of engine 1 or engine 3, or "REVERSER VALVE OPEN" light of engine 1 or engine 3, is inoperative.
- C. Takeoff is permitted only if the affected reverser(s) has been locked out.
- D. For landing with both wing thrust reversers deactivated:
For Model DC-10-15, DC-10-30, DC-10-30F, and DC-10-30F (KC10A and KDC-10) airplanes, increase the required runway length by 10% under wet or contaminated runway conditions.
For Model DC-10-10 and DC-10-10F airplanes, increase the required runway length by 22% under wet runway conditions, and increase the required runway length by 48% under contaminated runway conditions.
- E. For takeoff with both wing thrust reversers deactivated:
For all airplane models, takeoff with both wing thrust reversers deactivated is prohibited under contaminated runway conditions. Increase the required runway length by 5% under wet runway conditions."

Lock-out of Thrust Reverser

(b) If the conditions in paragraph (b)(1) or (b)(2) of this AD occur: Before the next flight, lock out any affected thrust reverser by accomplishing both maintenance procedures for fan reverser deactivation and locking and the optional method for fan reverser deactivation and locking in Boeing DC-10 Minimum Equipment List (MEL) Procedures Manual, Item 78-1, Revision 11, dated January 1999, according to that document.

(1) The "REVERSER UNLOCK" (also labeled "REV IN TRANS") light of engine 1 or engine 3, or the "REVERSER VALVE OPEN" light of engine 1 or engine 3, is inoperative or illuminates when the thrust reverser is in the stowed position.

(2) A thrust reverser does not stow after landing.

Operation With a Locked-Out Thrust Reverser/Return to Service

(c) An airplane may operate indefinitely with a thrust reverser that has been locked out according to this AD in lieu of MEL criteria. An operator may only return a locked-out thrust reverser to service when the cause of the condition that prompted the lock-out of the thrust reverser (as specified in paragraph (b)(1) or (b)(2) of this AD, as applicable) has been determined and corrected. The corrective action must be approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA. Operators must submit requests for such approvals through an appropriate FAA Principal Maintenance or Operations Inspector, who may add comments and then send it to the Manager, Los Angeles ACO. For a corrective action to be considered approved by the Manager, Los Angeles ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Terminating Action

(d) Installation of an additional locking system on each thrust reverser according to paragraph (c) of AD 2001-17-19, amendment 39-12410, terminates the requirements of this AD. After that action has been accomplished, the AFM revision required by paragraph (a) of this AD may be removed from the AFM.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance or Operations Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished, with the following limitations:

- (1) The affected reverser must be in the stowed position before takeoff.
- (2) The affected engine must be shut down and isolated from bleed air.
- (3) The airplane may carry no passengers and only minimum crew.

Incorporation by Reference

(g) The lock-out of an affected thrust reverser, if accomplished, shall be done in accordance with Boeing DC-10 Minimum Equipment List Procedures Manual, Item 78-1, Revision 11, dated January 1999, which contains the following list of effective pages:

Page number	Date shown on page
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This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; at the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on May 17, 2002.

Issued in Renton, Washington, on April 19, 2002.
Lirio Liu-Nelson,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 02-10248 Filed 5-1-02; 8:45 am]
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